

**REMARKS**

This Amendment is a full and timely response to the Office Action dated October 21, 2003. Reexamination and reconsideration are respectfully requested.

**Claim for Priority**

It is noted with appreciation that the Action acknowledges receipt of the priority document in support of the claim for foreign priority.

**Drawings**

Figs. 6 and 7 are hereby designated as – PRIOR ART—as discussed in the specification at pages 2 to 5 of the amended specification.

**Amended Specification**

It was not noted that the Action acknowledged receipt of an amended specification as submitted on August 11, 2002, along with a clean copy thereof. Please acknowledge that document so that this application is in condition for printing upon allowance. A copy of the substitute specification and red-lined copy are attached for your convenience.

**Original Claims 1 to 6**

As to the original claims 1 to 6, the Examiner indicated that claims 2 and 5 were merely objected to as depending on a rejected base claim and would be allowable if amended to be placed into independent form. Accordingly, the subject matter of claims 1 and 4, respectively, is amended to include the subject matter of allowable claims 2 and 5, thus placing amended claims 1 and 4 into condition for allowance. Claims 2 and 5 are thus canceled, and claims 3 and 6 retained as dependent on the amended and allowable claims 1 and 4.

To the extent that certain of the originally-submitted claims were rejected on the basis of the Rich reference, USP 5,862,460, those rejections are rendered moot by the manner in which allowable subject matter in claims 2 and 5 is incorporated into claims 1 and 4 respectively.

Newly-added Claims 7 to 12

Claims 7 to 12 are newly-added to provide a scope and range of claims for the Applicant's invention that is not found in the Rich reference.

According to the present invention, a control voltage supply circuit 13 generates a control voltage for compensating the non-linearity of a variable gain circuit 11. The control voltage supply circuit 13 has at least one threshold voltage such as  $V_{k1}$  or  $V_{k2}$  and converts from the input control voltage  $V_C$  to the compensating output control voltage  $V_{c18}$  for generating a compensating voltage less than or greater than the two threshold voltages, respectively. Such a circuit does not compensate the control voltage between the two stated threshold voltages. Thus, newly-added claim 7 is submitted to claim this combination of features, followed by a newly-added claim 8 that corresponds to original claim 2 but is dependent on claim 7. Thus, claim 7 is also allowable. Similarly, claim 9 corresponds to original claim 3, and is dependent on claim 7.

Newly-added claim 10 refers to, in this stated combination, a control voltage supply circuit 13 that has a voltage control supply circuit 3 that comprises at least two threshold voltages (such as  $V_{k1}$  or  $V_{k2}$ ) and a current switch for generating the compensating currents to generate the compensating control voltage at an output terminal, in order to supply a larger or smaller voltage to an ideal control voltage.

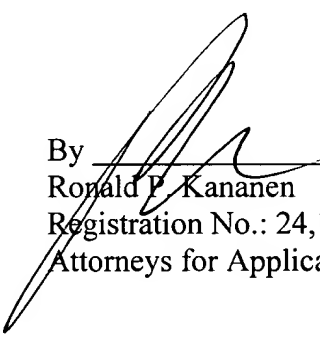
Newly-added claims 11 and 12 refer to the disclosed feature that the control voltage supply circuit 13 comprises at least two buffer circuits 14, 17, in which an output terminal of the second buffer is connected to an emitter of a transistor Q16 having an output voltage that is varied with compensating current from output transistors Q14 or Q18.

Conclusion

It is submitted that claims 1, 3, 4, 6 and 7 to 12 are allowable over the art of record and early notice to that effect is solicited. Claims 2 and 5 are canceled.

Respectfully submitted,

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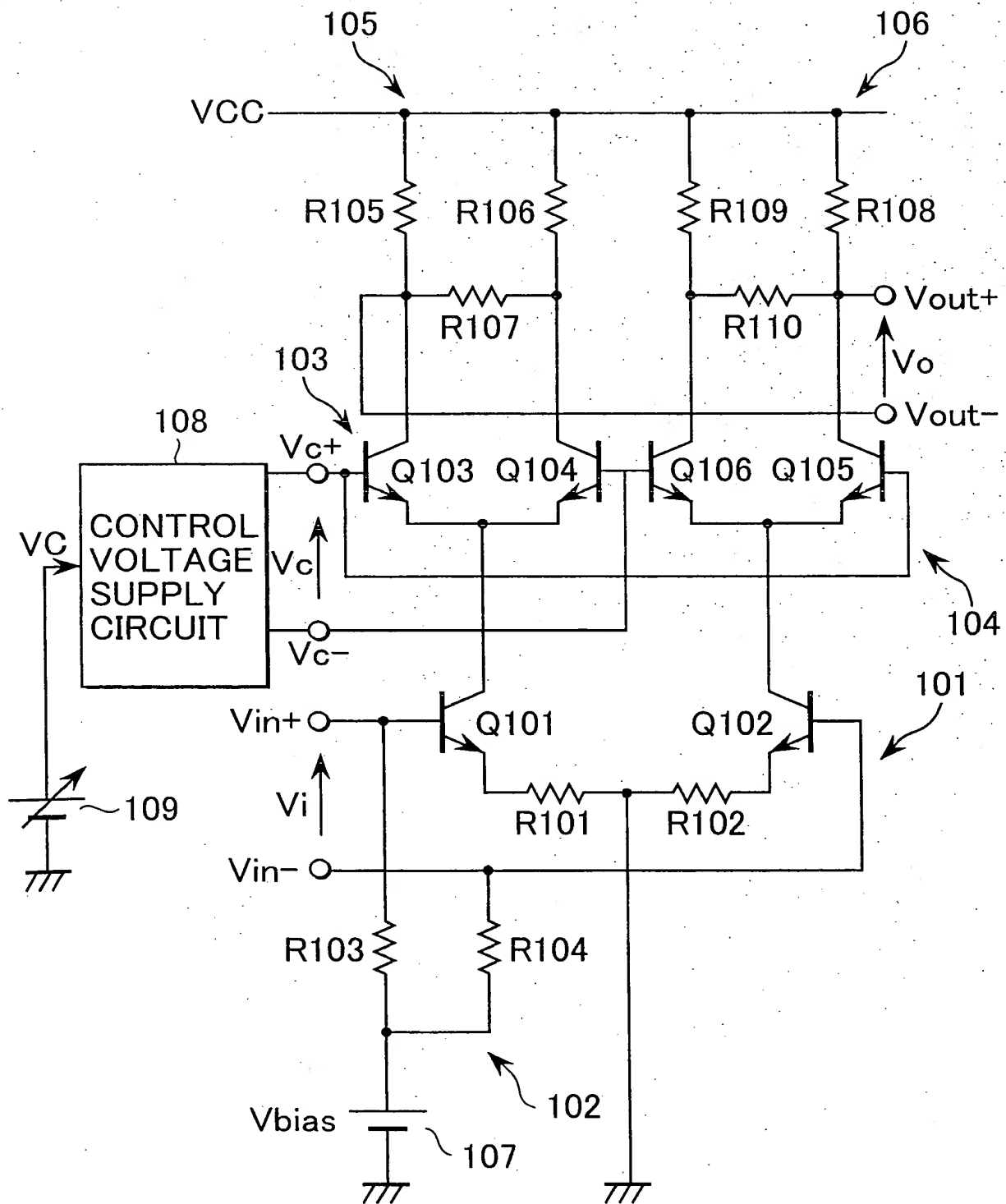
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FIG.6 Prior Art



7/7



FIG.7 Prior Art

